

DEFINITION OF WARNING, CAUTION, AND NOTE

Statements in the Operating Instructions preceded by the words "WARNING", "CAUTION", and "NOTE" carry special significance. The definitions of these words are as follows:



WARNING

Means there is a possibility of injury to oneself or others.



CAUTION

Means there is a possibility of damage to the instrument or other property.



NOTE Indicates points of particular interest for more efficient and convenient operation.

SUMMARY OF WARNINGS, CAUTIONS, AND NOTES

The following must be read before using the PreemiStar Incubator:



WARNING

Constant attention by a qualified medical attendant is required whenever a patient is placed in the incubator for two reasons:

- 1) Some malfunctions require immediate corrective action.
- 2) An alarm, or any combination of alarms, does not give total assurance of warning in the event of any and every form of malfunction of the incubator system.



WARNING

Read the Functional Checkout, Section 4, of this manual before placing the incubator into service. If a problem is recognized during any portion of the Functional Checkout Procedure, the incubator must be removed from use and serviced. Refer to qualified personnel for servicing.



WARNING

For infant safety Do Not leave the infant unattended while the front door is open. Do Not raise both sides of the Mattress with the Trendelenberg/Fowler mechanism. Do Not raise the hood with an infant in the incubator. If tubing or leads are connected to the infant this could result in harm to the infant. All necessary access to the infant can be achieved by means of the front door and hand ports.



WARNING

Do Not use the incubator unless it is securely attached to a Cabinet Stand or Variable Height Lift using the side clamps to secure its mounting. Failure to do so could result in the incubator tipping over or separating from the Cabinet Stand.



WARNING

Do Not lift hood/base from Cabinet Stand or Variable Height Lift using the Guard Rail. Remove hood/base independently of the Guard Rail.



WARNING

Do Not place the incubator in direct sunlight or in proximity to any other source of radiant heat. External heat sources can cause elevated interior temperatures that may overheat the infant. Phototherapy units placed too close to the incubator may affect hood wall temperature, internal hood temperature and infant skin temperature.



WARNING

An electrical shock hazard exists when performing cleaning and maintenance procedures. Make sure that POWER switch is in the OFF (0) position and the power cord is disconnected from the wall receptacle.



WARNING

When an X-Ray is taken through the hood, the hole in the top of the hood could show up on the X-Ray as a radiolucent shadow and could result in an incorrect diagnosis.



WARNING

To ensure proper operation of the Skin Temperature Sensor, the infant's skin must be thoroughly cleaned and dried before placing the sensor on the skin. With the infant on its back or side, the sensor should be placed on the abdomen. When the infant is prone, the sensor should be on the infant's back, avoiding bony structures. The sensor must never be placed under the infant or used rectally.



WARNING

Do Not place seats, toys, blankets, diapers, head boards, radiant heat shields, etc., within the incubator that may cause interruption of the normal air flow pattern and adversely affect temperature stability and uniformity. The use of accessories within the incubator which can alter the air flow pattern may affect temperature uniformity, temperature variability correlation of the incubator temperature reading to the center mattress temperature and the infant skin temperature.



WARNING

Do Not hang or place any material or object(s) from the air temperature sensor element located on the right wall of the incubator hood. This can cause erroneous temperature readings and adversely affect operation.



WARNING

Do Not lubricate the MATTRESS POSITION mechanism with grease, oil or other flammable materials. In an oxygen enriched environment, this can cause a fire.



WARNING

Remove infant from incubator before moving the unit from one location to another. To prevent personal injury or damage to the incubator, two people will be required to control movement of incubator during relocation.



WARNING

Use only Infrasonics specified Skin Temperature Sensor, P/N 930-0312 for reusable type or P/N 930-0349 for "single patient use" type. Failure to use an Infrasonics' sensor may result in failure or improper operation of incubator.



WARNING

This device is not designed for use in an explosive atmosphere or in the presence of flammable anesthetics. Use in such environments may present an explosion hazard.



WARNING

Improper administration of supplemental oxygen (O_2) has been associated with blindness, brain damage and death, as well as other serious side effects which vary with each patient. Always monitor O_2 concentrations with a properly calibrated O_2 analyzer. Do not rely on O_2 flow to accurately determine O_2 concentration.



WARNING

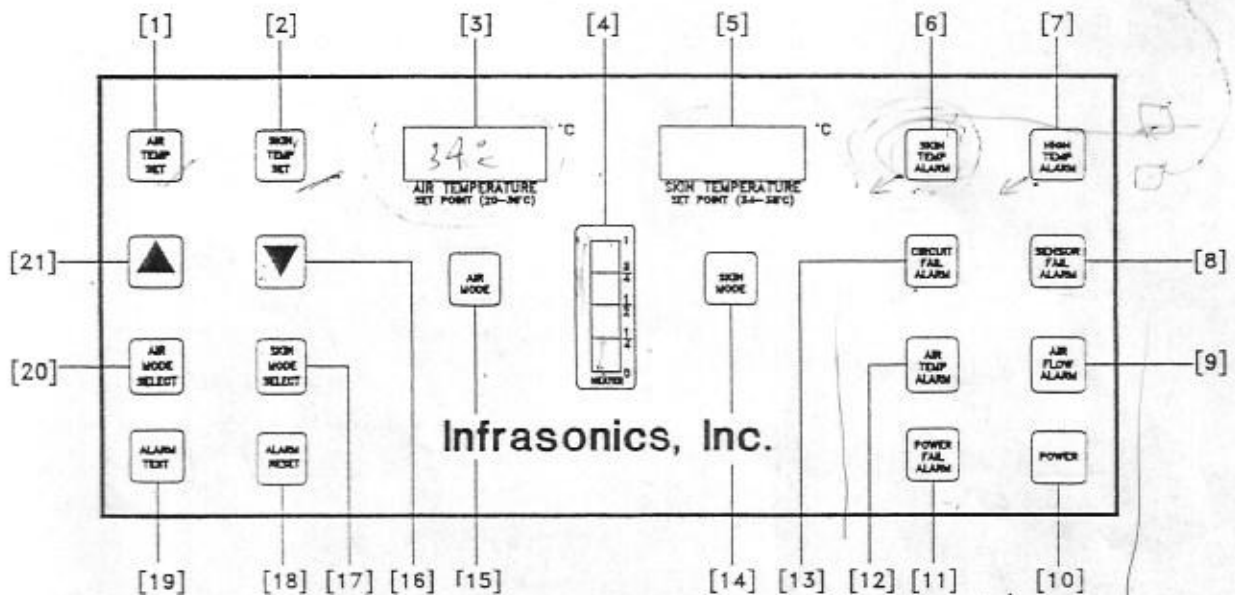
A dirty air intake filter may affect oxygen concentrations and carbon dioxide (CO_2) removal. Replace filter a minimum of every 90 days or when visible dirty. Never reverse a dirty filter. Always use a new filter. Replace with an approved Infrasonics Air Filter (P/N 930-0311).

SECTION 3

INDICATORS AND PANEL DESCRIPTIONS

DESCRIPTION

The following description covers both the Model 205 and the Model 305 Incubators. The controller used in the two products is identical.



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Illustration 2 - Controller Front Panel

[18] ALARM RESET

When this button is pressed, the audible alarm will be silenced for 15 minutes. If the cause of the original alarm condition persists, the alarm will again sound after the 15 minute silence. The **AIR FLOW ALARM**, **CIRCUIT FAIL ALARM** and **POWER FAIL ALARM** cannot be silenced.

[19] ALARM TEST

When pressing this key, both of the temperature displays [3] and [5] will indicate 88.8. In addition, the **HEATER** power indicator [4] will completely illuminate. Either the **AIR MODE** [15] or the **SKIN MODE** [14] indicator will be illuminated, based on the mode being used. **HIGH TEMP ALARM**, **CIRCUIT FAIL ALARM** and **POWER FAIL ALARM** indicators on the right side of the panel should be flashing and the audible alarm sounding intermittently. All other **ALARM** indicators should be illuminated.

[20] AIR MODE SELECT

Depressing and holding for two seconds or more causes **AIR MODE** to be selected. The heater is disabled during the time the button is depressed.

[21] INCREASE

When pressed simultaneously with the **AIR TEMP SET** [1], allows the **AIR TEMPERATURE SET POINT** to be increased. When pressed simultaneously with **SKIN TEMP SET** [2], allows the **SKIN TEMPERATURE SET POINT** to be increased.

SIDE PANEL CONTROLS AND CONNECTIONS

- [A] Main **POWER ON/OFF** switch.
- [B] Connector for **SKIN** Temperature **SENSOR**.
- [C] Connector for **AIR** temperature **SENSOR**.
- [D] Power cable plug.

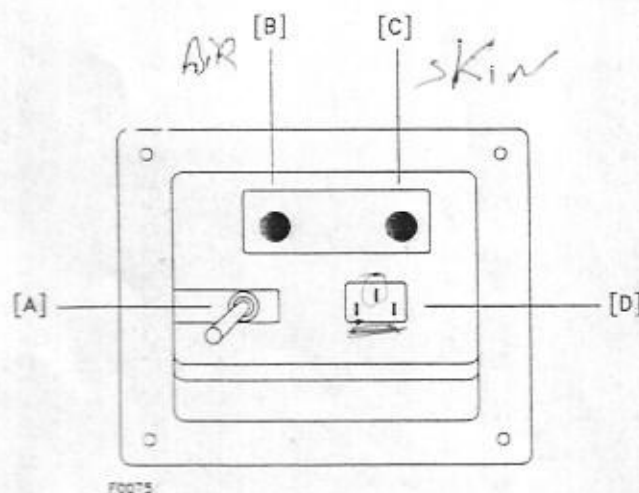


Illustration 3 - Controller Side Panel

SECTION 4

FUNCTIONAL CHECKOUT

FUNCTIONAL CHECKOUT PROCEDURE

This operational and functional checkout should be performed prior to putting the incubator into use and after any disassembly for cleaning or repair.



WARNING

Read the Functional Checkout, Section 4, of this manual before placing the incubator into service. If a problem is recognized during any portion of the Functional Checkout Procedure, the incubator must be removed from use and serviced. Refer to qualified personnel for servicing.

1. Before connecting the incubator to electrical power (wall outlet), turn the POWER switch to the ON position. The POWER FAIL ALARM should come on. Turn the POWER switch to the OFF position and the ALARM will go off. If the alarm fails to activate, refer to qualified personnel for servicing. The alarm backup battery may require replacement.
2. Connect the main power cable to a wall outlet.



CAUTION

Connect the power cord only to a properly marked "Hospital Grade" receptacle. Do Not remove the round ground prong from the plug. Never use extension power cords that are not "Hospital Grade."

3. Inspect the air intake filter on the back of the unit. If visibly dirty, it should be replaced.



WARNING

A dirty air intake filter may affect oxygen concentrations and carbon dioxide (CO₂) removal. Replace filter a minimum of every 90 days or when visibly dirty. Never reverse a dirty filter. Always use a new filter. Replace with an approved Infrasonics Air Filter (P/N 930-0311).

4. Push the incubator **POWER** switch to the **ON** position. Press the **ALARM TEST** button. All **ALARM** lights should come on and the audible alarm should sound. If any failure is detected, the unit should be referred to qualified personnel for servicing.



NOTE The **ALARM TEST** should be performed a minimum of once each day and may be done during normal operation of the incubator.

5. Ensure the incubator is in the **AIR MODE** by pushing and holding the **AIR MODE SELECT** button for 2 seconds. Close the hood access openings. Set the **AIR TEMPERATURE** to 34° C (default setting) by pushing and holding the **AIR TEMP SET** button and adjusting the **INCREASE/DECREASE** button accordingly. Allow 45 minutes for warm up. When the **AIR TEMPERATURE** has stabilized, the **HEATER** power indicator should show 1/4 to 3/4 power. The **AIR TEMPERATURE** should remain within 0.5° C of the set point.

6. Test the **AIR MODE** alarm by changing the set point temperature to 1.1° C below and then 3.1° C above the 34° C displayed temperature. The visual and audible alarm should be activated at each test setting and canceled when the **AIR TEMPERATURE** is returned to the setting of 34° C.

7. Check the **SKIN MODE** operation by pushing and holding the **SKIN MODE SELECT** button for 2 seconds. Close all hood access openings. Plug in the Skin Temperature Sensor and lay the sensor in the center of the mattress. Set a **SKIN TEMPERATURE** of 36° C (default setting) by pushing and holding the **SKIN TEMP SET** button and adjusting the **INCREASE/DECREASE** button accordingly. Allow hood air temperature to increase until **SKIN TEMPERATURE** display remains within 0.5° C of the set point.



WARNING

To ensure proper operation of the Skin Temperature Sensor, the infant's skin must be thoroughly cleaned and dried before placing the sensor on the skin. With the infant on its back or side, the sensor should be placed on the abdomen. When the infant is prone, the sensor should be on the infant's back, avoiding bony structures. The sensor must never be placed under the infant or used rectally.

8. Test the **SKIN MODE** alarm by changing the set point temperature to 1.1° C below and then above the 36° C displayed temperature. The visual and audible alarm should be activated at each test setting and automatically canceled when the **SKIN TEMPERATURE SET POINT** is returned to the display setting of 36° C.

9. Test the **SENSOR FAIL ALARM** by disconnecting the **AIR** temperature **SENSOR** from the connector. The audible and visual alarms should activate and the **HEATER** power indicator should be 0.

The incubator should return to normal operation when the **SENSOR** is plugged back into the connector.

10. Check operation of the Trendelenberg/Fowler mechanism (Model 305) by raising and lowering each side. Do not apply excessive force when near the maximum height as this can damage the mechanism. Check operation of 2 position mattress elevator (Model 205) by raising and lowering each side.

11. Check that the mattress deck assembly is seated properly and is secured to the incubator base. Check that the rubber gasket is in place; the hood should make contact with the gasket on all sides.

12. Check the operation of the access ports by pushing the port door release. Each door should swing open. Close the door and check that the door latch is working properly.

13. Check the Iris ports by rotating the outer ring and noting the opening and closing of the Iris Port Sleeve.

Functional Checkout of the incubator is now complete.

If the unit is going to be stored, turn the **POWER** switch to the **OFF** position and close all hood openings.

Should any problems be detected during the Functional Checkout Procedure, the incubator must be referred to qualified personnel for servicing.

SECTION 5

OPERATION

GENERAL INFORMATION



NOTE Complete the Functional Checkout, Section 4, before placing the incubator into use.

The incubator should be opened for a few minutes to air, then closed and prewarmed before placing into use. Turn the **POWER** switch to the **ON** position. The incubator will default to the **AIR MODE**. Set the desired temperature based on physician or hospital protocol. The incubator should be prewarmed without water in the **HUMIDITY RESERVOIR** and without the Skin Temperature Sensor connected.



WARNING

Constant attention by a qualified medical attendant is required whenever a patient is placed in the incubator for two reasons:

- 1) Some malfunctions require immediate corrective action.
- 2) An Alarm, or any combination of alarms, does not give total assurance of warning in the event of any and every form of malfunction of the incubator system.



WARNING

For infant safety Do Not leave the infant unattended while the front door is open. Do Not raise both sides of the mattress with the Trendelenberg/Fowler mechanism. Do Not raise the hood with an infant in the incubator. If tubing or leads are connected to the infant this could result in harm to the infant. All necessary access to the infant can be achieved by means of the front door and hand ports.



WARNING

Do Not use the incubator unless it is securely attached a Cabinet Stand or Variable Height Lift using the side clamps to secure its mounting. Failure to do so could result in the incubator tipping over or separating from the Cabinet Stand.



WARNING

Mattress temperature may fall below the preset level if the front door is left open. The **AIR TEMPERATURE** display does not accurately reflect incubator temperature when the front door is open.



WARNING

Do Not place the incubator in direct sunlight or in proximity to any other source of radiant heat. External heat sources can cause elevated interior temperatures that may overheat the infant. Phototherapy units placed too close to the incubator may affect hood wall temperature, internal hood temperature and infant skin temperature.



WARNING

This device is not designed for use in an explosive atmosphere or in the presence of flammable anesthetics. Use in such environments may present an explosion hazard.



WARNING

Do Not place seats, toys, blankets, diapers, head boards, radiant heat shields, etc., within the incubator that may cause interruption of the normal air flow pattern and adversely affect temperature stability and uniformity. This may affect the correlation of incubator temperature and infant skin temperature. The use of accessories within the incubator which can alter the air flow pattern may affect temperature uniformity, temperature variability correlation of the incubator temperature reading to the center mattress temperature and the infant skin temperature.



WARNING

Do Not hang or place any material or object(s) from the air temperature sensor element located on the right wall of the incubator hood. This can cause erroneous temperature readings and adversely affect operation.



WARNING

When an X-Ray is taken through the hood, the hole in the top of the hood could show up on the X-Ray as a radiolucent shadow and could result in an incorrect diagnosis.



WARNING

Always lock the wheel brakes when the incubator is in use.



CAUTION

Never exceed recommended weight limits for accessories. See labels on each accessory.

AIR MODE

Place infant into the incubator through opened front door and close the front door. Both left and right front door latches must be positively secured to protect against accidental opening.

Select the **AIR TEMPERATURE SET POINT** by pushing and holding the **AIR TEMP SET** button and then pushing the **INCREASE/DECREASE** buttons as required. When the **AIR TEMP SET** button is pushed, the **AIR TEMPERATURE** display will indicate the set point.

Note the following:

1. The number illuminated on the **HEATER** power indicator provides an indication of the amount of heater output required to maintain the incubator hood air temperature at the prescribed set point.
2. The **AIR TEMPERATURE** display indicates the incubator air temperature, Not the infant's skin temperature.
3. The infant's temperature should be routinely monitored according to hospital protocol.

SKIN MODE

Connect the Skin Temperature Sensor into the connector on the side panel. Pass the sensor cable through the Tubing Port, see Illustration 4. The area where the sensor is to be placed should be thoroughly cleaned and dried before the sensor is placed on the skin. When the infant is supine, the sensor should be placed on the abdomen. When the infant is prone, the sensor should be on the infant's back or lateral segment, avoiding any bony areas.



WARNING

To ensure proper operation of the Skin Temperature Sensor, the infant's skin must be thoroughly cleaned and dried before placing the sensor on the skin. With the infant on its back or side, the sensor should be placed on the abdomen. When the infant is prone, the sensor should be on the infant's back, avoiding bony structures. The sensor must never be placed under the infant or used rectally.



WARNING

Use only Infrasonics specified Skin Temperature Sensor, P/N 930-0312 for reusable type or P/N 930-0349 for "single patient use" type. Failure to use an Infrasonics' sensor may result in failure or improper operation of incubator.

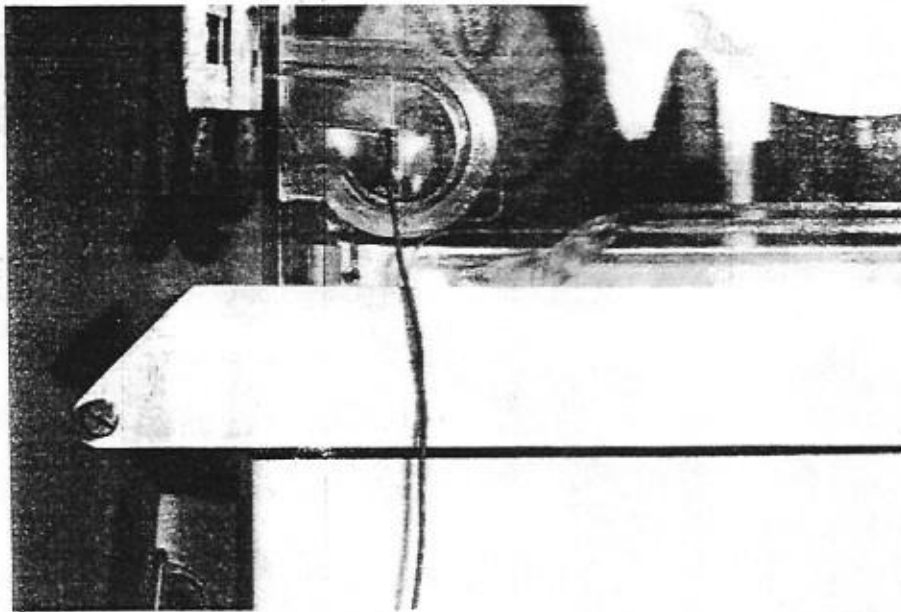


Illustration 4 - Skin Temperature Sensor Placement

Select the **SKIN TEMPERATURE** by pushing and holding the **SKIN TEMP SET** button and pushing the **INCREASE/DECREASE** buttons as required. When the **SKIN TEMP SET** button is pushed, the **SKIN TEMPERATURE** display will indicate the set point.

Note the following:

1. The number illuminated on the **HEATER** power indicator provides an indication of the amount of heater output required to maintain the infant skin temperature at the prescribed set point.
2. The **SKIN TEMPERATURE** display indicates infant's skin temperature.
3. The **AIR TEMPERATURE** display indicates the incubator air temperature required to maintain infant skin temperature at the prescribed set point. The **AIR TEMPERATURE** is Not controlled by **AIR TEMP SET** point in the **SKIN MODE**.
4. The infant's temperature should be routinely monitored as prescribed by the attending physician or established hospital protocol.

HUMIDITY RESERVOIR

If additional humidification is required, fill the **HUMIDITY RESERVOIR** with sterile water.

Turn the humidity filler body to the up position and fill to the bottom mark as shown in Illustration 5. Replace cap over filler body. A single filling is enough for one or more days of operation. When the reservoir is filled, the **RELATIVE HUMIDITY** inside the incubator ranges from 50-70% at 37° C. If ambient temperature in the nursery is low, water vapor in the incubator may condense on the hood walls impeding full vision of the infant. This condensation will not affect the function of the incubator.



Illustration 5 - Humidity Fill Body

The water in the HUMIDITY RESERVOIR should be changed each day. Never add water to a partially filled reservoir. To drain the water, place a receiving pan under the filler body, remove the cap, and rotate the filler body to the down position as shown in Illustration 6.

The Hygrometer located in the hood will display the percent RELATIVE HUMIDITY $\pm 10\%$ in the infant compartment.



NOTE The Hygrometer indicates the RELATIVE HUMIDITY Not temperature.



NOTE Do Not leave water in the HUMIDITY RESERVOIR when the incubator is stored.

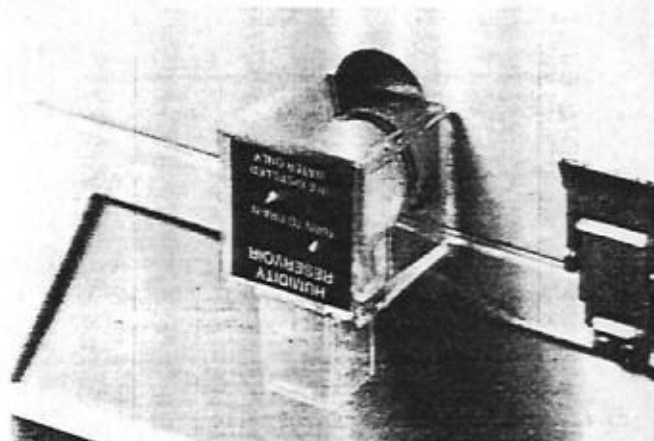


Illustration 6 - Humidity Reservoir Drain



WARNING

Remove infant from incubator before moving the unit from one location to another. To prevent personal injury or damage to the incubator, two people will be required to control movement of incubator during relocation.

INFANT ACCESS

The incubator is fitted with a front door, four access ports, and two Iris ports providing full access to the infant.



WARNING

The complete hood should never be raised while an infant is in the incubator. Access to the infant can be achieved by means of the access door and ports.

ACCESS DOOR

The front of the hood contains a door to provide free access to the interior as shown in Illustration 7. The door is opened and closed using the two rotating latches located in the upper left and right hand corners. The Mattress may be pulled straight out in the guides to facilitate patient care. Do not force, improper use may cause tray dislodgement.



WARNING

To prevent patient injury, both Multi-positional Mattress Elevators must be in the DOWN position before the Mattress is pulled out.



WARNING

Never leave the infant unattended while any Iris port, port door, or access door is open.



Illustration 7 - Access Door

ACCESS PORTS

The incubator is fitted with four ports which are used for routine procedures. In order to avoid contamination these ports can be opened by pressing their catches with an elbow as shown in Illustration 8. These ports may be fitted with a Port Cuff which will reduce the loss of air from the incubator when the port is opened. If the Port Cuff is not necessary, it may be removed. To create a better seal, a No Cuff Port Door Gasket must be used when no cuffs are required.



NOTE A cuff cannot be attached to the No Cuff Port Door Gasket.

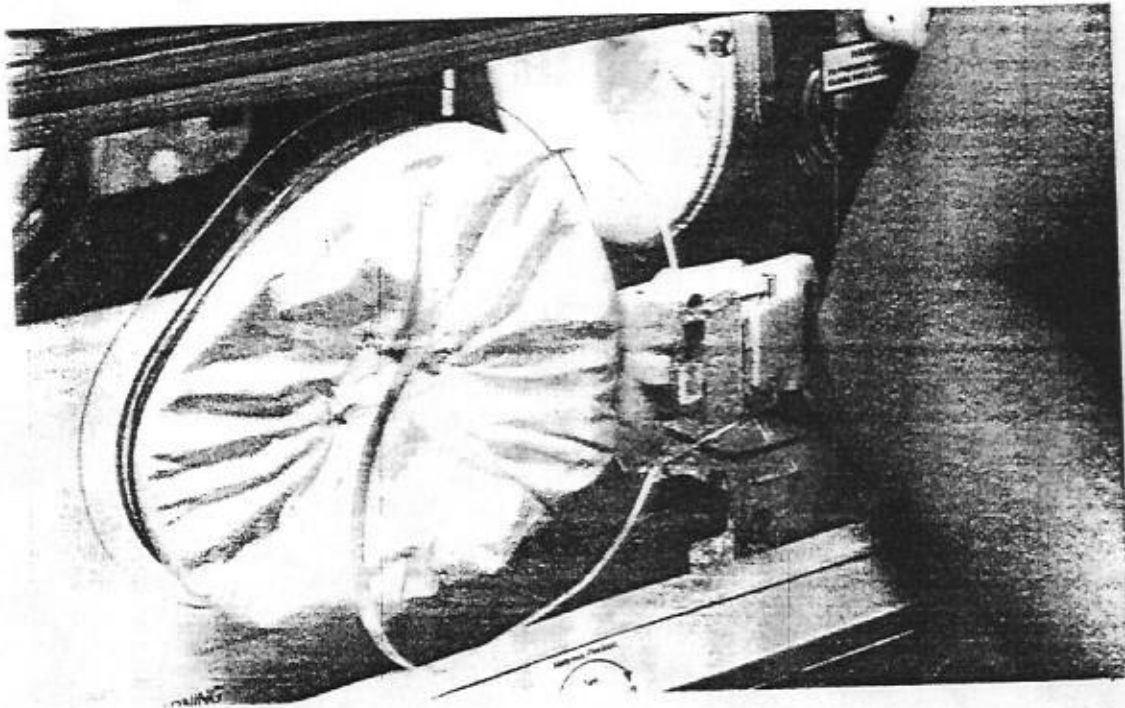


Illustration 8 - Opening Ports

TUBING PORTS

The hood is fitted with four Tubing Ports; two on each end. Sensors, such as the Skin Temperature Sensor, and other tubing may be routed through these ports.



NOTE Tubes larger than one half inch should be routed through the Iris ports.

IRIS PORTS

The hood is fitted with two Iris ports; one at each end. The Iris ports are fitted with a disposable Iris Port Sleeve and may be opened and closed by rotating the rings. The ports may be used for passing large tubes and cables and providing access to the infant.

MATTRESS ELEVATOR

This assembly allows the infant to be positioned in a Trendelenburg or Fowler position (Model 305). Turn the knob clockwise to raise the mattress and counterclockwise to lower the mattress. Do not apply excessive force in an attempt to increase the height; this will damage the mechanism. The mattress should be down at both ends when the door is opened. If the knob is difficult to turn, do not force. Refer the incubator to qualified personnel for servicing. The Model 205 has a lever which allows adjustment of a full up and down position only.



WARNING

For infant safety **Do Not** leave the infant unattended while the front door is open.
Do Not raise both sides of the mattress with the Trendelenburg/Fowler mechanism.
Do Not raise the hood with an infant in the incubator. If tubing or leads are connected to the infant this could result in harm to the infant. All necessary access to the infant can be achieved by means of the front door and hand ports.

OXYGEN ENRICHMENT (Optional)

The Oxygen Enrichment System (P/N 930-0605) is available as an option for either the Model 205 or Model 305. By replacing the existing air filter cover with the oxygen enrichment cover, oxygen can be introduced into the incubator air circulation, see Illustration 9.

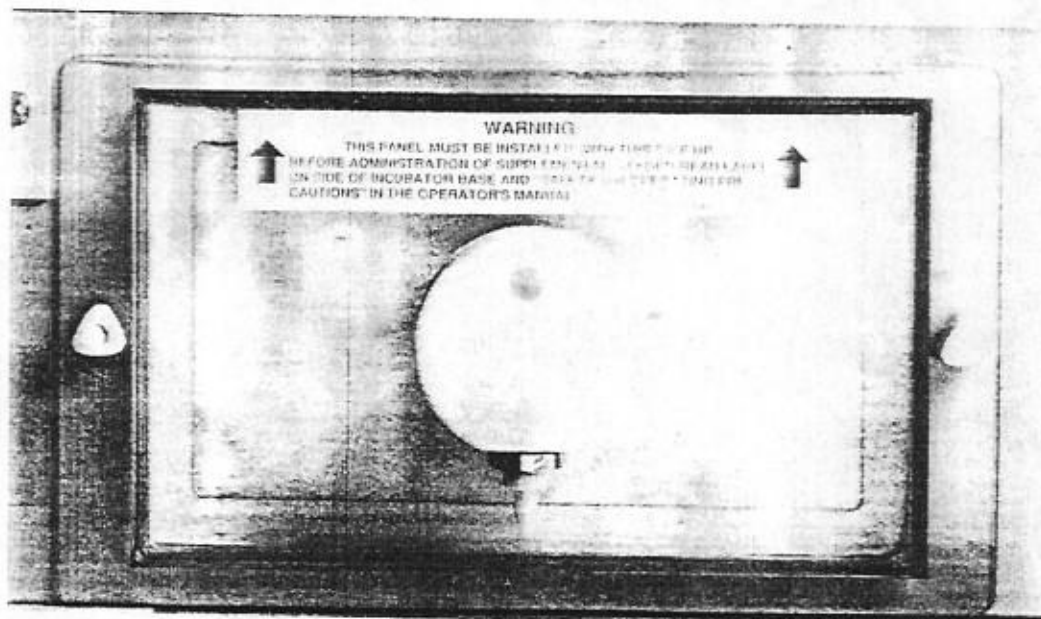


Illustration 9 - Oxygen Enrichment

The oxygen concentration will vary depending on the liter flow of oxygen being used. Illustration 10 outlines the approximate oxygen concentration achieved when different liter flows of 100% oxygen are used.

Flow Rate	Concentration
2 LPM	30%
4 LPM	35%
6 LPM	45%
8 LPM	50%
10 LPM	60%
15 LPM	70%

Illustration 10 - Oxygen Concentrations



WARNING

Always monitor oxygen (O_2) concentrations with a properly calibrated O_2 analyzer. The partial pressure of arterial oxygen (P_aO_2) should be periodically monitored as prescribed by the attending physician or established hospital protocol.



WARNING

The Oxygen Enrichment System must be evaluated prior to each use. Ensure that the floating puck moves freely up and down. If any resistance is noted, remove the puck and clean the puck and track with alcohol. Upon reassembly, the beveled end must point downward.

SECTION 6

CLEANING AND MAINTENANCE

GENERAL

This section provides cleaning and maintenance procedures for the incubator. All maintenance other than that detailed in this section should be performed by qualified personnel only.

CLEANING SCHEDULE

السنة الموعده

Following removal of the infant, or at least once a week, the incubator should be cleaned and disinfected.



WARNING

Never attempt relocation of the incubator without first removing all auxiliary equipment from the incubator.



CAUTION

Verify that all oxygen supply systems connected to the incubator have been turned off and disconnected before starting any cleaning or maintenance procedures. A fire hazard exists in the presence of oxygen enriched atmospheres.



CAUTION

Do Not use alcohol, or any solvent based solution that contain alcohol, such as Windextm. Alcohol can cause crazing or cracking of the clear hood and other plastic parts.



CAUTION

Do Not expose the hood assembly to direct radiation from germicidal lamps. Ultraviolet radiation from these sources can cause cracking of the gaskets and crazing of the hood.

The PreemiStar Incubators are designed and constructed to ease the task of cleaning and disinfection. All areas associated with the infant environment are accessible without the use of tools.



NOTE

For normal cleaning, the hood/base and Cabinet Stand or Variable Height Lift do not need to be separated. Separation will require two people. Do Not lift hood/base by Guard Rail.

DISASSEMBLY FOR CLEANING

The controller module should be removed to prevent accidental soaking. Turn the **POWER OFF**, remove the power cord from the wall outlet and all **SENSORS** from the side panel.



WARNING

The controller heater can be hot enough to cause burns. Wait 45 minutes after the **POWER** has been turned **OFF** before removing the controller from the incubator base.



WARNING

Do Not lift hood/base from Cabinet Stand or Variable Height Lift using the Guard Rail. Remove hood/base independently of the Guard Rail.



CAUTION

After removing the controller, **Do Not** stand controller unit on end. The controller may fall and damage the high temperature sensor located on the rear of the controller.

Remove the controller from the base by rotating the two latches as shown in Illustration 11.

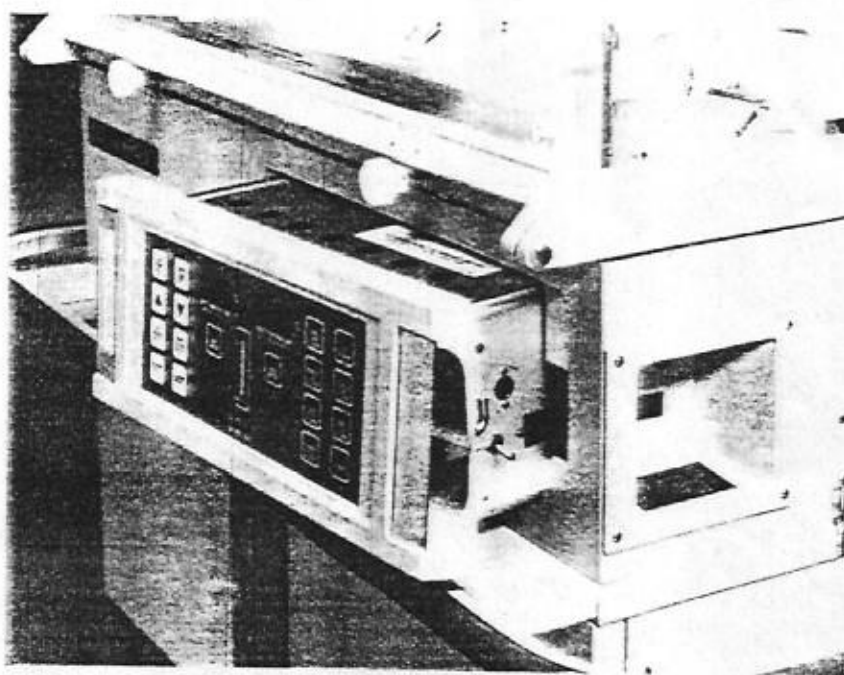


Illustration 11 - Releasing Controller Latches

Open the hood front door and remove the Double Wall if incubator is so equipped. See Illustrations 12 and 13 for the removal of the hood and door Double Walls. Remove the Port Cuffs and Gaskets. Remove the Iris Port Sleeves and the Iris port by turning and pulling out on the outer ring, remove the Iris Port Gasket, and then push the main part of the port inward.

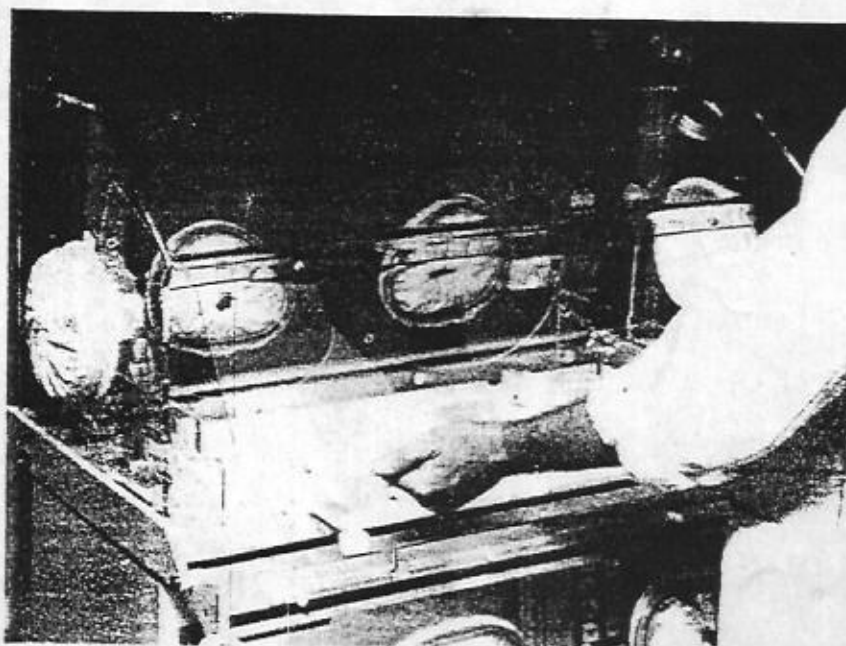


Illustration 12 - Removing Double Wall From Hood

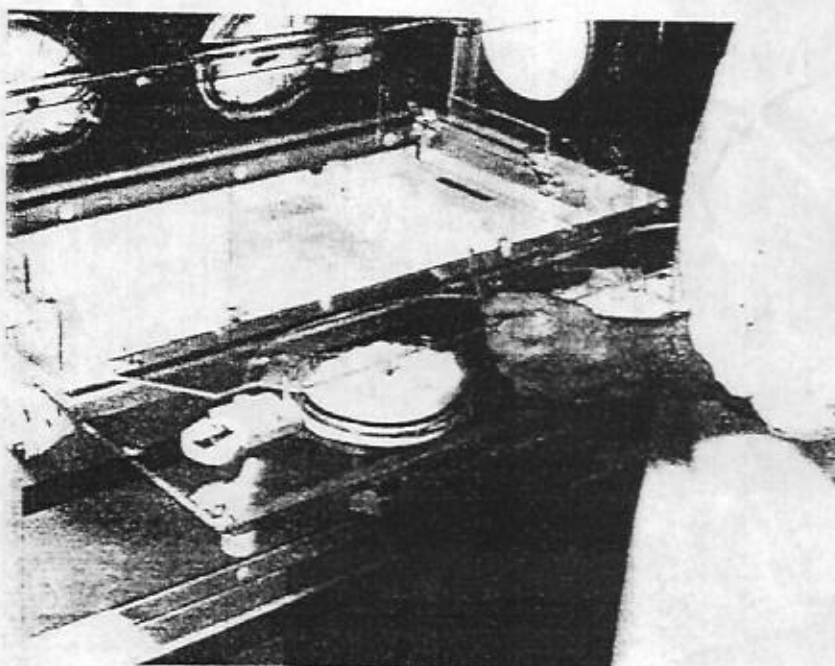


Illustration 13 - Removing Double Wall From Access Door

Remove the Tubing Ports from each side of the hood. Remove the gaskets from each port door and the gasket on top of the access door.

Remove the Hygrometer from the top of the hood by unscrewing the thumb screws on each side. Remove the Hygrometer, O-ring and cup. Do not immerse the Hygrometer in liquid cleaner.

Lift the hood up into the locked open position. Remove the Mattress and main deck assembly.

Drain any remaining water. Remove the humidity fill body assembly by rotating counterclockwise. Do Not remove the drain tube from the tub.

Remove the MATTRESS POSITION mechanism assembly by turning the knob clockwise until the arms are in the full up position. Lift the cover up and pull forward as shown in Illustration 14. Remove the shaft and arms by pushing to the right and then pulling out, as shown in Illustration 15.

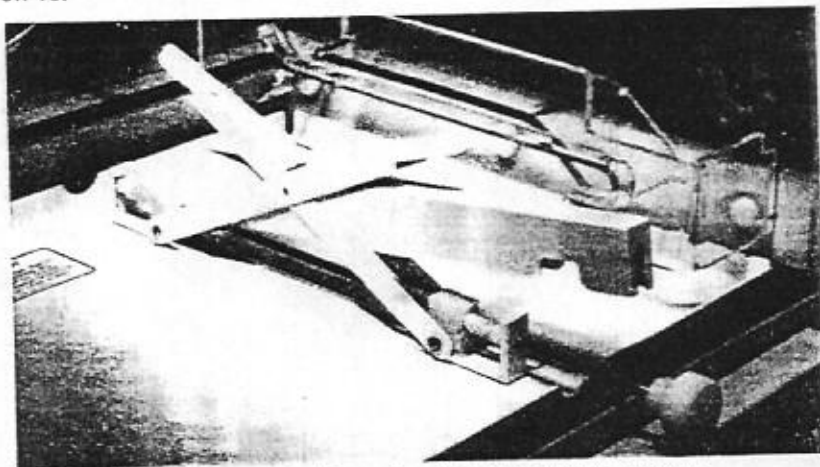


Illustration 14 - Removing Mattress Elevator Cover

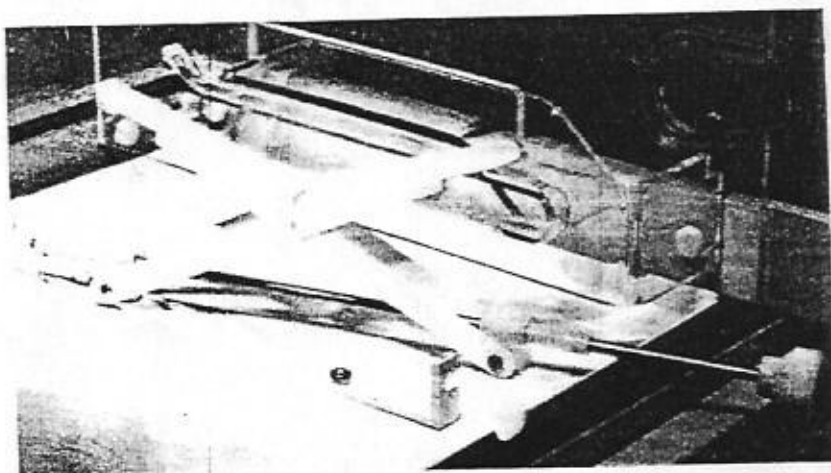


Illustration 15 - Removing Shaft and Arms



WARNING

Do Not lubricate the MATTRESS POSITION mechanism with grease, oil or other flammable materials. In an oxygen enriched environment, this can cause a fire.

CLEANING

A cleanser such as Micro Aseptic "Kleenaseptic"™ Germicidal (P/N 630-0001) may be used. When using any cleaning agent, follow the manufacturer's direction for use.

Do not start any cleaning until the incubator is empty and disassembled as previously described. Remove all solid debris and contaminants from the disassembled parts.

Clean the incubator as follows:

1. Fill the HUMIDITY RESERVIOR with a disinfectant or detergent. Allow some time to soak, then drain, wipe and dry with soft clean cloth.
2. Using a disinfectant or detergent, clean the mattress tray, MATTRESS POSITION mechanism, and mattress deck assembly.
3. Using a disinfectant or detergent, clean the back of the controller module, heater element, and fan wheel.
4. Using a mild disinfectant or detergent, clean the hood. Dry with a soft cloth. **Do Not** use paper towels.

GAS STERILIZATION

If gas sterilization (ETO) is to be used, the entire incubator should first be cleaned as described in this section. All disposable elements including the Mattress should be removed and replaced with new. Open the access door. Remove the controller module.

Upon completion of gas sterilization, an aeration period is required. The minimum recommended aeration is 24 hours, with the incubator operating in the AIR MODE with the AIR TEMPERATURE set at 34° C.



CAUTION

Do Not use alcohol, or any solvent based solution that contain alcohol, such as Windex™. Alcohol can cause crazing or cracking of the clear hood and other plastic parts.



CAUTION

Do Not allow cleaning agents to contact electrical components.
Do Not spray cleaning agents into the controller.



WARNING

Failure to clean impeller and heater element will result in excessive lint buildup and reduced airflow. Reduced airflow will affect temperature control and cause high carbon dioxide (CO₂) concentrations.



WARNING

An electrical shock hazard exists when performing cleaning and maintenance procedures. Make sure that POWER switch is in the OFF (0) position and the power cord is disconnected from the wall receptacle.



CAUTION

Do Not gas sterilize the controller module. Gas sterilization may be done after removing the module but, sterilization temperature should not exceed 54.5° C, (130° F).



CAUTION

Do Not dry heat sterilize any part of the incubator.

REASSEMBLY AFTER CLEANING

After cleaning, all parts of the incubator should be reassembled in the following order:

1. Install the deck gasket on the tub.
2. Install the MATTRESS POSITION mechanisms on the mattress deck.
3. Install the mattress deck assembly.
4. Lower the hood to the closed position, open the access door.
5. Install the mattress tray and Mattress.
6. Install the Iris Port Rings, Gasket and Sleeves.
7. Install the hand Port Door Gaskets and cuffs.
8. Install the Double Wall, if so equipped.

Check that incubator is securely latched to the Cabinet Stand or Variable Height Lift.

Perform a complete Functional Checkout, Section 4, before the incubator is returned to use.